

Edward C. Lewandowski  
Tower Automotive  
221 South Progress Dr. West  
Kendallville, IN 46755

Re: Registered Operation Status,  
**113-10800-00039**

Dear Mr. Lewandowski:

The application from Tower Automotive, received on March 25, 1999, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following stamping, welding and paint coating system, located at 221 South Progress Dr. West, Kendallville, Indiana, is classified as registered:

- (a) Five (5) natural gas-fired combustion units within the Electrodeposition Coating (E- Coat) Line;
  - (1) One (1) natural gas-fired E-Coat Tank Heater identified as C1, with a maximum heat input rate of 0.7 million British Thermal Units (MMBtu) per hour and exhausting to stack # 1.
  - (2) One (1) natural gas-fired E-Coat Zone 1 Oven identified as C2, with a maximum heat input rate of 3.0 MMBtu/hr and exhausting to stack # 4.
  - (3) One (1) natural gas-fired E-Coat Stage 2 Heater identified as C3, with a maximum heat input rate of 3.0 MMBtu/hr and exhausting to stack # 2.
  - (4) One (1) natural gas-fired E-Coat Stage 5 Heater identified as C4, with a maximum heat input rate of 2.5 MMBtu/hr and exhausting to stack # 2.
  - (5) One (1) natural gas-fired E-Coat Zone 2 Oven identified as C5, with a maximum heat input rate of 6.0 MMBtu/hr and exhausting to stack # 3.
- (b) One (1) Electrodeposition Coating (E-Coat) Line identified as E-Coat, using Resin (CR590) and Paste (CP534) for surface coating;
- (c) Robotic Welding Stations using twenty-seven (27) Metal Inert Gas (MIG) welders with a maximum wire consumption rate of 2.84 pounds per hour and exhausting to stacks # 9-15.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6)

minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

Pursuant to 326 IAC 6-3-2 (Particulate emission limitations), the particulate matter (PM) from the welding stations shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the Electrodeposition Coating Line shall be limited to 3.0 pounds of VOCs per gallon of coating less water.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

NH/EVP

cc: File - Noble County  
Noble County Health Department  
Air Compliance - Doyle Houser  
Permit Tracking - Janet Mobley  
Air Programs Section- Michelle Boner

<b>Registration Annual Notification</b>
---------------------------------------------

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

<b>Company Name:</b>	<b>Tower Automotive</b>
<b>Address:</b>	<b>221 South Progress Dr. West</b>
<b>City:</b>	<b>Kendallville</b>
<b>Authorized individual:</b>	<b>Edward C. Lewandowski</b>
<b>Phone #:</b>	<b>(219) 347-4100</b>
<b>Registration #:</b>	<b>113-10800-00039</b>

I hereby certify that Tower Automotive is still in operation and is in compliance with the requirements of Registration 113-10800-00039.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

## **Indiana Department of Environmental Management Office of Air Management**

### **Technical Support Document (TSD) for a Registration**

#### **Source Background and Description**

**Source Name:** Tower Automotive  
**Source Location:** 221 South Progress Dr. West, Kendallville, IN 46755  
**County:** Noble  
**SIC Code:** 3465, 3479  
**Operation Permit No.:** R113-10800-00039  
**Permit Reviewer:** Nishat Hydari/EVP

The Office of Air Management (OAM) has reviewed an application from Tower Automotive relating to the operation of stamping, welding and paint coating system.

#### **Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) Five (5) natural gas-fired combustion units within the Electrodeposition Coating (E- Coat) Line;
  - (1) One (1) natural gas-fired E-Coat Tank Heater identified as C1, with a maximum heat input rate of 0.7 million British Thermal Units (MMBtu) per hour and exhausting to stack # 1.
  - (2) One (1) natural gas-fired E-Coat Zone 1 Oven identified as C2, with a maximum heat input rate of 3.0 MMBtu/hr and exhausting to stack # 4.
  - (3) One (1) natural gas-fired E-Coat Stage 2 Heater identified as C3, with a maximum heat input rate of 3.0 MMBtu/hr and exhausting to stack # 2.
  - (4) One (1) natural gas-fired E-Coat Stage 5 Heater identified as C4, with a maximum heat input rate of 2.5 MMBtu/hr and exhausting to stack # 2.
  - (5) One (1) natural gas-fired E-Coat Zone 2 Oven identified as C5, with a maximum heat input rate of 6.0 MMBtu/hr and exhausting to stack # 3.
- (b) One (1) Electrodeposition Coating (E-Coat) Line identified as E-Coat, using Resin (CR590) and Paste (CP534) for surface coating;
- (c) Robotic Welding Stations using twenty-seven (27) Metal Inert Gas (MIG) welders with a maximum wire consumption rate of 2.84 pounds per hour and exhausting to stacks # 9-15.

### Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

### Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP 113-3404-00039, issued on April 7, 1994; and
- (b) A113-6843-00039, issued on November 8, 1996.

All conditions from previous approvals were incorporated into this permit.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
1	E-Coat Line - Stage1	45	2.00	4000	90
2	E-Coat Line - Stages 2 thru 5	45	2.00	2000	450
3	E-Coat Line - Zone 2 Oven	45	2.00	4000	300
4	E-Coat Line - Zone 1 Oven	45	2.00	4000	125
5	E-Coat Line - Stage 8	45	2.00	4000	70
6	E-Coat Line - Cooling Zone	45	3.00	10000	100
8	E-Coat Line - E-Coat Dip Tank	45	2.00	4000	70
9	Robotic Welding	45	2.66	8500	70
10	Robotic Welding	45	2.66	8500	70
11	Robotic Welding	45	3.00	10000	70
12-15	Robotic Welding	Varying Heights for Each	Apprx. 1-2 Each	Varying Airflows for Each	70

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on March 25, 1999.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 5).

## Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	1.88
PM-10	2.26
SO <sub>2</sub>	0.04
VOC	22.96
CO	5.59
NO <sub>x</sub>	6.66

HAP's	Potential To Emit (tons/year)
Glycol Ethers	0.39
TOTAL	0.40

## Actual Emissions

No previous emission data has been received from the source.

## County Attainment Status

The source is located in Noble County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Noble County has been classified as attainment or unclassifiable for PM-10. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

## Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	1.88
PM10	2.26
SO <sub>2</sub>	0.04
VOC	22.96
CO	5.59
NO <sub>x</sub>	6.66

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit R113-10800-00039, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

## State Rule Applicability - Entire Source

### 326 IAC 2-6 (Emission Reporting)

This source is located in Noble County and the potential to emit VOC and NO<sub>x</sub> is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.



- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the welding stations shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

**State Rule Applicability - Individual Facilities**

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the Electrodeposition Coating Line shall be limited to 3.0 pounds of VOCs per gallon of coating less water.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

**Conclusion**

The operation of this stamping, welding and paint coating system shall be subject to the conditions of the attached proposed **R113-10800-00039**.

## Appendix A: Emission Calculations

**Company Name:** Tower Automotive  
**Address City IN Zip:** 221 S. Progress Dr. W., Kendallville, IN 46755  
**CP:** 113-10800  
**Plt ID:** 113-00039  
**Reviewer:** Nishat Hydari

Uncontrolled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Natural Gas Combustion	Welding	Surface Coating	TOTAL
PM	0.13	1.75	0.00	1.88
PM10	0.51	1.75	0.00	2.26
SO2	0.04	0.00	0.00	0.04
NOx	6.66	0.00	0.00	6.66
VOC	0.37	0.00	22.59	22.96
CO	5.59	0.00	0.00	5.59
total HAPs	0.00	0.01	0.39	0.40
worst case single HAP	0.00	0.01	0.39	0.39
Total emissions based on rated capacity at 8,760 hours/year.				
Controlled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Natural Gas Combustion	Welding	Surface Coating	TOTAL
PM	0.13	1.75	0.00	1.88
PM10	0.51	1.75	0.00	2.26
SO2	0.04	0.00	0.00	0.04
NOx	6.66	0.00	0.00	6.66
VOC	0.37	0.00	22.59	22.96
CO	5.59	0.00	0.00	5.59
total HAPs	0.00	0.01	0.39	0.40
worst case single HAP	0.00	0.01	0.39	0.39
Total emissions based on rated capacity at 8,760 hours/year, after control.				

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**

**Company Name:** Tower Automotive  
**Address City:** 221 S. Progress Dr. W., Kendallville, IN 46755  
**CP:** 113-10800  
**Plt ID:** 113-00039  
**Reviewer:** Nishat Hydari

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

15.2
------

133.2

Heat Input Capacity includes the following:

<b>Facilities</b>	<b>MMBtu/hr</b>
E-Coat Tank Heater	0.70
E-Coat Zone 1 Over	3.00
E-Coat Stage 2 Hea	3.00
E-Coat Stage 5 Hea	2.50
E-Coat Zone 2 Over	6.00
<b>TOTAL</b>	<b>15.2</b>

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.13	0.51	0.04	6.66	0.37	5.59

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu  
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03  
(SUPPLEMENT D 3/98)  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
above emission  
factors to confirm

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**HAPs Emissions**

Page 2 of 4 TSD App A

**Company Name:** Tower Automotive  
**Address City:** 2210 S. Progress Dr. W., Kendallville, IN 46755  
**CP:** 113-10800  
**Plt ID:** 113-00039  
**Reviewer:** Nishat Hydari

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.398E-04	7.989E-05	4.993E-03	1.198E-01	2.264E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	3.329E-05	7.323E-05	9.321E-05	2.530E-05	1.398E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Company N Tower Automotive

Address C 221 S. Progress Dr. W., Kendallville, IN 46755

CP: 113-10800

Plt ID: 113-00039

Reviewer: Nishat Hydari

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS * (lb pollutant / lb electrode)				EMISSIONS (lb/hr)				TOTAL HAPS (lb/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Metal Inert Gas (MIG)(ER 70S-3 and ER	27	2.84	0.0052	3.4E-05		1E-05	0.399	0.00260712	0.000	0.000767	0.003
EMISSION TOTALS							PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr							0.40	0.00	0.00	0.00	0.00
Potential Emissions lbs/day							9.57	0.06	0.00	0.02	0.08
Potential Emissions tons/year							1.75	0.01	0.00	0.00	0.01

## METHODOLGY

\*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.

Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).

Welding and other flame cutting emission factors are from an internal training session document.

See AP-42, Chapter 12.19 for additional emission factors for welding.

**Appendix A: Emissions Calculations**  
**VOC and Particulate**  
**From Surface Coating Operations**

**Company Name:** Tower Automotive  
**Address:** 221 S. Progress Dr. W., Kendallville, IN 46755  
**CP:** 113-10800  
**Plt ID:** 113-00039  
**Reviewer:** Nishat Hydari

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Resin (CR590)	8.80	64.00%	63.0%	1.0%	66.2%	33.00%	0.00610	3600.000	0.26	0.09	1.93	46.38	8.46	0.00	0.27	100%
Paste (CP534)	11.00	45.00%	38.4%	6.6%	50.7%	40.00%	0.00120	3600.000	1.47	0.73	3.14	75.27	13.74	0.00	1.82	100%
Ethylene Glycol N-Butyl	7.49	100.00%	0.0%	100.0%	0.0%	0.00%	0.012*	--	7.49	7.49	0.00	0.00	0.39	0.00	ERR	100%

<b>State Potential Emissions</b>	<b>Add worst case coating to all solvents</b>	<b>5.07</b>	<b>121.65</b>	<b>22.59</b>	<b>0.00</b>
----------------------------------	-----------------------------------------------	-------------	---------------	--------------	-------------

\*Usage rate is 0.012 gal/hr

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations**  
**HAP Emission Calculations**

Page 5 of 5 TSD AppA

**Company** Nan Tower Automotive  
**Address** City 1221 S. Progress Dr. W., Kendallville, IN 46755  
**CP#:** 113-10800  
**Plt ID:** 113-00039  
**Permit Review** Nishat Hydari

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Xylene Emission s (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyd e Emissions (ton/yr)	Benzene Emission s (ton/yr)	Hexane Emission s (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)
Resin (CR590)	8.80	0.006100	3600.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paste (CP534)	11.00	0.001200	3600.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethylene Glycol N-Butyl	7.49	0.012*	--	0.00%	0.00%	0.00%	0.00%	0.00%	99.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.39	0.00

Total State Potential Emissions

**0.00      0.00      0.00      0.00      0.00      0.39      0.00**

\*Usage rate is 0.012 gal/hr

**METHODOLOGY**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs